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10/727,118	12/02/2003	Jeffrey J. Fitzgerald	CDPC-P01-003	4402
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/727,118

Applicant(s)

FITZGERALD, JEFFREY J.

Examiner

PHUONGCHAU BA NGUYEN

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2008.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-19 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 02 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

Claim Rejections – 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35

U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1–3, 5, 7–9, 11–13, 16–19 are rejected under 35 U.S.C. 102(e) as being anticipated by Powers (US2005/0147107 A1).

Regarding claims 1, 12 and 17,

Powers (US2005/0147107 A1) discloses a method of improving network availability in a segmented network, comprising the steps of:

periodically transmitting a test message over a plurality of communication links from a source node in communication with a source

network segment to a plurality of destination nodes, each of the plurality of destination nodes being in communication with a respective destination network segment (fig.3, steps 200-205 and see 0025 wherein a test cell is transmitted one at a time—thus indicated the periodically test transmission, emphasis added);

generating, for each of the plurality of destination nodes, a return message if the test message is received at the destination node (fig.3, step 210);

determining the status of each of the plurality of communication links in response to the return messages generated by the plurality of destination nodes (fig.3, steps 225-230 & also see 0018, 0024-0028, wherein the loopback would identify the no-pass path via a code) ; and

providing the status of the plurality of communication links to each of the plurality of destination nodes that generated a return message (fig.3, steps 230 & 245, the status (unavailable or available) of the plurality of the communication was provided to each of the plurality of destination nodes that generated a return message at the database 70, see 0027-0028).

Regarding claims 2, 18,

Powers further discloses wherein the step of determining the status further comprises indicating a fault in one of said one or more paths if said source node does not receive at least a predetermined number of return messages from said destination nodes in response to a predetermined number of test messages transmitted to said destination nodes (fig.3, step 220 & also see 0024).

Regarding claims 3, 19,

Powers further discloses the step of configuring one of said paths between said source node and said one or more destination nodes in response to the determined status (fig.3, steps 230 & 245, also see 0018, 0024-0028).

Regarding claims 5, 16,

Powers further discloses wherein the return message is an echo message generated in response to the test message (fig.3, step 210, wherein loopback

the test cell as return message—emphasis added).

Regarding claim 7,

Powers further discloses the step of updating a routing table in response to the determined status (fig.3, steps 230 & 245).

Regarding claim 8,

Powers further discloses wherein the step of configuring includes avoiding paths through dead links between nodes or paths connecting to unresponsive destination nodes (see 0006, wherein transmitting a test cell to avoid sending data along incorrect virtual channels—in other word, fault paths, emphasis added).

Regarding claim 9,

Powers further discloses wherein determining the status includes the steps of:

waiting a pre-determined period of time for the return message from a destination node (fig.3, step 220), and

if the status of the destination node has changed, the source node updating a local adjacency status table, and propagating an updated routing table to other nodes on the segmented network (fig.3, steps 230 & 245).

Regarding claims 11, 13,

Powers further discloses wherein the test message is transmitted approximately once per second (see 0025 wherein test message is transmitted one at a time).

Claim Rejections – 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole

would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Powers.

Regarding claims 6 and 14, Powers does not explicitly disclose the source and destination nodes are selected from the group of a host, a router, and a load balancer.

However, it would have been obvious to an artisan to implement the Powers's teaching to different network having nodes/devices/systems such as host, router, load balancer,..., .etc., to determine status of virtual channels and to avoid sending data on a fault path/channel. This is a common practice in the art.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Powers as applied to claim 1 above, and further in view of Ootake (JP401101751A).

Regarding claim 4, Powers discloses all the claimed limitations, except (1) wherein the test message is an LLC type 1 frame format.

However, in the same field of endeavor, Ootake (JP401101751A) discloses transmitting a test command LLC type 1, see constitution part of the translation, corresponding to (1). Therefore, it would have been obvious to an artisan to apply Ootake's teaching to Powers's system with the motivation being to allow test equipment to communicate each terminal equipment thereby simplifying the constitution of the bridge.

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Powers as applied to claim 1 above, and further in view of Stewart (4,745,593).

Regarding claim 10, Powers discloses all the claimed limitations, except (1) wherein said test message is not sent within the same segment.

However, in the same field of endeavor, Stewart (4,745,593) discloses sending a single test to detect faults and to localize faults between network

nodes (abstract & see col.1, lines 58-63). Therefore, it would have been obvious to an artisan to apply Stewart's teaching to Powers's system with the motivation being to allow repair or replacement of defective equipment and to allow rapid packet routing adjustments to be made within the network.

Response to Arguments

7. Applicant's arguments filed 4-10-8 have been fully considered but they are not persuasive.

a/. Applicant argued that Powers does not teach a system for providing "status of the plurality of communication links to each of the plurality of destination nodes that generated a return message" as recited in claim 1. Powers does not disclose providing a "status message" to "each of the destination nodes" as recited in claims 12 and 17.

In reply, applicant is directed to Powers-figure 3 wherein the looped back test cell having the identifier code (return status message) indicating the status of the plurality of communication links to each of the plurality of destination nodes (interfaces 80, 85, 90, 95) as passed through or looped back, see 0027-

0028. For a connection between central 60 and remote terminal 65, the available or unavailable status messages were provided to each destination node 65 at the central office terminal database 70 based on the looped back test receipts. Therefore, each destination node was provided a status message (physical alarm) of the plurality of communication links at the database 70.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHUONGCHAU BA NGUYEN whose telephone number is (571)272-3148. The examiner can normally be reached on Monday-Friday from 8:30 a.m. to 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Firmin Backer can be reached on 571-272-6703. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service

Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/PHUONGCHAU BA NGUYEN/
Examiner, Art Unit 2616

/FIRMIN BACKER/
Supervisory Patent Examiner, Art Unit 2616